

## **Project Summary**

### **Rocky Mountains Cooperative Ecosystem Studies Unit**

**Project** Baseline Sound Monitoring at Grant Kohrs Ranch NHS

**Discipline:** Interdisciplinary  
**Type of Project:** Technical assistance  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** Montana State University  
**Effective Dates:** September 22, 2008- December 1, 2010  
**Funding Amount:** \$20,000

**Investigators and Agency Representative:**

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**Project Abstract:**

**Background Information**

Grant Kohrs Ranch NHS currently has no data characterizing the sounds of the park; the Deer Lodge airport is expanding General Aviation operations, for which there is limited FAA monitoring. GRKO is 1.5 miles from the airport and the same distance from I-90 freeway. Cultural and natural sounds need to be preserved (2006 MP sect. 4.9, 5.3.1.7).

Significance: The Grant-Kohrs Ranch (GRKO) was established to provide an understanding of the frontier cattle era. Congress believed the best format for visitor understanding was to maintain the site as a working ranch. The cultural soundscape associated with the working ranch is core to visitor enjoyment and understanding. The sounds of a working ranch (bulls bellowing, draft horses pulling haying equipment, the blacksmith sharpening sickle mower blades) help immerse visitors in the historic time period the park helps preserve.

Severity: An imminent threat to the site's cultural soundscape is the continued enlargement of the City of Deer Lodge airport. Recently, a large neighboring ranch was purchased, developed, and sold to individuals flying into the area in Lear jets and helicopters. The airport has been expanded to accommodate this and future land development in the area. Although some sounds from the community surrounding the park unit may not affect resources or interfere with visitor experience, substantial increases in transportation noise pose threats.

Problem Resolution: The project will increase the understanding and staff/visitor awareness of cultural soundscapes by park staff. This information will form the basis of future resource planning and management at the park required by 2006 Management Policy, 5.3.1.7. The baseline information will provide a key tool to assess the impact of impending airport development requests.

GRKO will work with Montana State University and the NRPC-Natural Sounds Program to plan and then monitor "natural," "cultural," and other sounds to establish a baseline. GRKO will submit a technical assistance request to NRPC-Natural Sounds Program for FY-09 (Deadline October 24<sup>th</sup>, 2008). This request will allow NRPC-Natural Sounds Program to lend equipment and technical assistance during the project. Forms may be obtained online at <http://www1.nrintra.nps.gov/TAC/TAC09/>. Cooperators will identify acoustic zones and monitor the soundscape during summer 2009. Data will be analyzed and reported upon in a format which will facilitate cooperative planning with FAA. Additional monitoring will occur during a "phase 2" based on the summer 2008 results.

**Outcomes with Completion Dates:**

- Detailed scope of work and budget to be delivered to GRKO by December 20, 2008.
- Final report by May 31, 2010
- Copies of associated field records such as data, photographs, site notes, etc. submitted to the Grant-Kohrs Ranch archives by December 1, 2010.

**Keywords:** Soundscapes, working cattle ranch, Gran-Kohrs Ranch NHS, Montana State University